



Case Report

Chronic hepatitis C – Assessment in civil law: A case study

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ABSTRACT

This article describes the case of a 58-year-old man who asked for an assessment of physical damage of a civil nature, having been diagnosed with chronic hepatitis C for which he blamed a blood transfusion, supposedly contaminated with hepatitis C virus (HCV). After studying the documentary information, a number of presuppositions were drawn up with a view to determining the causal nexus, but this could not be proved. The assessment of situations like this is not common in civil law. This article is intended to add to the body of information on the forensic assessment of similar cases.

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1. Introduction

Hepatitis C was included in the non-A and non-B hepatitis group until 1989, when it was discovered through the identification of its aetiological agent,¹ HCV, which belongs to a virus group exhibiting marked hepatic tropism. It is the commonest chronic disease transmitted by blood in a number of countries, particularly the United States,² being an important cause of pathology of the liver.

It starts with an acute stage, with symptoms usually appearing 4–12 weeks after infection. Symptoms include general malaise, asthenia and loss of appetite and tests show increased hepatic enzymes, especially ALT.³ The acute stage, common to all patients, may be followed by the chronic form, defined as viremia and lasting for more than 6 months post-infection. The likelihood of this evolution is between 60% and 85%.² Chronically infected persons are 15–20% more likely to develop cirrhosis of the liver, progressing to hepatocellular cancer in only a small number of patients (0–3%).²

The high probability of HCV becoming chronic, plus the increased risk of cirrhosis and hepatocellular cancer,⁴ which is the commonest reason for liver transplant,² makes this particularly

interesting in terms of expert assessment, with special reference to the forensic approach of the sequelae present and a monetary compensation reward to people infected with the disease. Furthermore, the issues relating to establishing the causal nexus are far from being linear.

Assessment of hepatitis C cases is rare in civil law, with very few reports in the forensic literature and, as a result, very few expert opinions on this subject.^{5–7} This is a gap that urgently needs filling, especially if we consider the public health issues that emerged after problems related to the contamination of blood with HCV and HIV (human immunodeficiency virus). All this called into question the safety of blood banks, with the resulting increase in legal concerns vis-à-vis liability for the undue contamination of innocent people.^{8,9}

This article thus seeks to call attention to this kind of assessment as well as provide elements that could be useful to the study and discussion of similar cases.

2. Case description

Male, 58-year-old, bricklayer by trade, who underwent a forensic bodily damage expert assessment under civil law in 2003 in the Department of Clinical Forensic Medicine of the National Institute of Legal Medicine of Portugal. This service performs bodily damage assessment in the fields of penal, work and civil law. He claimed that he had contracted chronic hepatitis C as a result of a blood transfusion he received on 12 January 1989, when he underwent surgery for a fracture to his right leg (after a road accident on 06

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January 1989), and he demanded that the transfusion should be held to have caused his hepatitis C, so that he could receive monetary compensation for the damage. For this he launched a civil action against the clinic where he was given the transfusion. According to his statement, some time later after the surgery (he did not know exactly when), he referred a period of “feeling unwell and being tired”, and he went to the Health Centre, where he “did some tests and was prescribed medication”. He was subsequently referred for a hospital appointment, when he was diagnosed with chronic hepatitis C.

The clinical records detailing the Accident and Emergency Departments visit after the road accident and a blood transfusion, on 06 January 1989 and 12 January 1989 respectively, coincided with the information given by the alleged victim, in the history of the incident. In relation to the symptoms he mentioned (whose date of occurrence he could not pinpoint exactly), it was confirmed that the first reference to these complaints in the clinical records from the Health Centre he went to were dated the end of 1998, that is nearly 10 years after the event. Liver tests changes were also described there (AST – 276 U/L; ALT – 430 U/L; γ GT – 137 U/L). The hospital records examined described clinical findings from 01 January 2000, at which time the victim still showed the hepatic changes and was positive for hepatitis C markers. There was also a reference to a liver biopsy carried out on 22 November 2000, after which treatment with interferon was started.

Regarding personal history, the victim denied drinking to excess or indulging in any risky behaviour (using injectable drugs, having unprotected sex with multiple partners), having tattoos or body piercings, and receiving any other blood transfusions.

During the forensic assessment, he exhibited appetite loss, asthenia and weight loss (6 kg after start of treatment). Medical examination revealed abdominal pain on palpation at the level of the right hypochondrium.

3. Discussion

The situation under consideration is quite complex from the expert's point of view. The problem in the bodily damage assessment lies in the question of how to establish a causal nexus¹⁰ between the therapeutic event (blood transfusion) and the hepatitis C diagnosed 10 years later, due to this long period of time elapsing between the alleged infecting episode and since there are so many ways the disease can be transmitted.

The most efficient transmission route for hepatitis C is parenteral exposure to HCV, so it is hardly surprising that the data from the Centres for Disease Control and Prevention (CDC)¹¹ confirm that the chief source of transmission is intravenous drug abuse (60% of cases). Risky sexual behaviour is the next most important source, with 15%, and blood transfusion leads to 10% of cases.

But blood transfusion can only be regarded as a major risk factor for the transmission of HCV if it had taken place before it became compulsory to check for anti-HCV antibodies in donor blood. In Portugal, the routine search for anti-HCV antibodies in transfused blood only started on 12 September 1991, via order 19/91 DR [Diário da República, official gazette] No. 210, series II. In other words, any blood transfusion received before the introduction of measures to detect *anti-HCV antibodies* can (and must) be ranked as a possible factor for transmitting the virus. So this was found in this particular case, since the transfusion took place on 12 January 1989.

If a causal nexus is to be safely established in this case, we believe that three basic presuppositions must be in place: negative detection of *anti-HCV antibodies* in the receiver, prior to transfusion; documented infection in the donor (or blood); documented acute infection in the receiver up to 6 months after transfusion.⁸

Meanwhile, for the non-acceptance of the causal nexus, we suggest the following aspects should be verified: exclusion of infection in the donor (or blood) on date of transfusion; evidence of infection in the receiver, prior to the transfusion; exclusion of HCV infection in the receiver up to 6 months after transfusion.

The aspects regarding the diagnosis or exclusion of HCV infection in the receiver up to 6 months after transfusion (acute stage of C hepatitis) are notably complex due to the fact that many people who contract C hepatitis infection are generally asymptomatic which causes diagnosing to be difficult¹² making it even harder to establish when the infection occurred. Also, even in the minority of patients when acute infection with HCV leads to symptomatic hepatitis, there is no definitive pathological test to diagnose acute HCV infection. Only by the means of an identifiable exposure to HCV (donor's blood) a recent seroconversion, marked increases in concentration of liver enzymes and exclusion of other causes of acute liver disease we can establish a circumstantial evidence of acute HCV infection.¹³ Even the detection of antibodies against HCV by immunoassay does not represent a reliable way to identify acute HCV infection since the absence of antibodies does not rule out infection on the acute setting.¹³ Confirmation of the diagnosis of acute HCV infection is done by the detection of HCV RNA with documented *anti-HCV antibody* seroconversion (4–10 weeks after exposure to HCV).¹⁴

Regarding the infection documentation in the donor, it can be demonstrated by detecting *anti-HCV antibodies* in the donor or its blood, on the date of transfusion.

In this case, however, there are no clinical elements to confirm that the blood the victim received might have been the source of the illness. Moreover, there are no elements that clearly and unequivocally allow it to be stated that this was so, and there is even a significant probability that it may not have been, in particular if we consider the time it took for symptoms to appear. On the other hand the situation does not fulfil also the proposed aspects for the non-acceptance of the causal nexus.

The causal nexus in the case presented can thus be regarded as hypothetical, since on the one hand there are elements that could lead us to decide in favour of ascribing it, while, on the other hand, there are factors that suggest it should not be ascribed. In this kind of causal nexus, as there are elements for and against ascribing it, the expert should not make a definitive statement, but rather leave it to the judge (being he the ultimate expert) to arbitrate on the question. But, Nonetheless, the expert's sensitivity should be expressed in the report (and this may take the form of an explanation of the trend of causality, i.e., if the trend is for or against), while care should also be taken to state any possible doubts.¹⁵ The judge, then, should find in the expert medical report all the arguments in favour of the allocation of responsibility and all those that oppose it.

The case in question poses another problem that has to be considered: it lies in the nature of the causal nexus, which in medical terms relate the cause and effect by means of a pathogenic affiliation. This causal nexus seems to be direct in nature, since the link between the blood transfusion and showing positive for HCV is direct, because the liability of the clinic that gave the transfusion is being assessed in this action. However, if the civil action had not been brought against the clinic that gave the transfusion, but against the other parties in the road accident, there would be an indirect causal nexus, since the link between the injury to the leg and showing positive for HCV is indirect, following from an operation that required a transfusion.

4. Conclusion

In the absence of clinical data on the date of the blood transfusion which the victim underwent (12 January 1989) and of routine check for this anti-HCV antibodies in blood, at this time in Portugal,

and also due to the large interval, it was not possible in this case to unequivocally state or deny the causal nexus between the transfusion and the chronic hepatitis C diagnosed in 2000. The infection could have been pre-existent, or it could have been contracted afterwards, by another route of transmission. As noted earlier, this is only a hypothetical causal nexus, since analysis of the criteria does not permit responsibility to be established with safety, but the expert may not formally remove it.¹⁵ These problems should be posed to the court with a detailed description of all the elements, as previously referred, in order to allow the court to decide.

Conflict of Interest

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Ethical Approval

None declared.

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